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The Monitor of the Civil War

By

DAVID R. ELLIS

(Deceased August 29, 1908)

Introduction by

WM. O. ELLIS

HIS SON

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FOREWORD

The old ship Monitor has lain at the bottom of the sea these many decades. Her plans were crude; but her mission was large, and the hopes which she bore as a part of her armament have lived and grown with the passing of the years.

The tale set forth in the following pages was first told to me, one summer's evening, as the old preacher and I stood looking at his garden. He was small, as stature goes, and his voice had weakened with illness and the coming of age. But as he unfolded that gallant tale, his voice became full and strong and he seemed to grow a giant in stature. He lived over again the scenes on board the Monitor, and he told the tale in so convincing a manner that it seemed that I too could see that eventful engagement with the Merrimac, feel the shock of shot pounding on the armor of the turret,—and finally, hear the roar of the wind and the sea, as they sang the death song of that little vessel.

Such tales are heritages which we cannot afford to lose. So long as our country has such hopes and ideals and such sons to support them, brave and gallant gentlemen all, from Lexington to Argonne Forest, so long will she stand firm through every peril—the true representative of real democracy.

ALFRED K. MILLS.

Annville, Pa.

INTRODUCTION

A score of years before the Monitor, in one of the greatest wars of history, crushed the hopes of the Confederacy, Theodore Timby, an obscure inventor, made in Syracuse, N. Y., a model of a revolving turret. Timby, it is said, conceived the idea of a floating battery while crossing New York harbor. The object which brought about this conception was Castle William on Governor's Island, now occupied by troops of the regular army. Indeed, the fort, with its portholes, is not unlike the turret which was used in the construction of the Monitor by Ericsson.

Returning to his home in Syracuse, Timby made a thorough study of his plans for a revolving turret. Accordingly, he made elaborate drawings illustrating such a battery which would revolve on a vertical section with all guns available for any direction. The inventor submitted his drafts to Senator John C. Calhoun, but apparently received no encouragement from him. In 1843, Timby was still so much impressed with the possibilities of the turret that he filed a caveat for the invention in the Patent Office at Washington. In the succeeding months he constructed, at an estimated expense of five thousand dollars, a pretentious model of his idea, which was later exhibited in New York at the old City Hall.

In June of 1843, President Tyler and his Cabinet examined this model. Two years later a mixed commission of army and navy officers reported against the turreted battery, although it is asserted that the chairman brought in a minority report. Timby became discouraged. He endeavored to keep the matter constantly before the Government, but no action was ever taken in the matter.

The system of mounting heavy guns in revolving turrets was advocated at quite an early date in England. Captain Cowper Cowles, in 1860, after his experiences in the Crimean war, advised the British Government to convert a few of her men-of-war into turreted battleships.

Captain John Ericsson was born July 31, 1803, at Wermland, Sweden. At the age of twelve, according to the records, he was in the employ of the Swedish Canal Company as a draftsman. From 1820-27 he served in the army, where his mechanical drawings attracted the attention of the King, who advanced him to the rank of Captain. In 1828 we find Ericsson went to London, where he formed a partnership with John Braithwaite, a Locomotive-Constructing Engineer. The following two years he worked out a plan for a marine engine to be placed below the waterline. These engines were tried out on the "Victory," but were pronounced unsatisfactory by British naval authorities. A similar engine was used in the Monitor. In 1836 he invented a screw propeller, but he could not establish priority for the invention in England.

Ericsson, therefore, came to New York in 1839 as a naval engineer, and the year following became a naturalized American citizen. His fame came in 1861 by again bringing the idea of the revolving turret before the United States Government. Backed by influential and wealthy men, he ultimately succeeded in having his plans for the Monitor accepted.

The Monitor, as is well known, wrought a revolution in maritime construction, particularly in men-of-war. She was among the first of battleships to have her engines placed below the water-line—the first successful experiment with submerged engines. Moreover, men-of-war owe directly to her the revolving turret and in common with the Merrimac iron-plates as armor. The Moni-

tor, in fact, is the prototype of the modern turreted destroyer, cruiser and dreadnaught.

Many other Monitors were built after the signal success of the first one. Farragut used them in opening up the Mississippi. Both England and France constructed them for their naval needs. The Monitors of the sixties and seventies were not sea-going craft. They achieved best results on rivers and in coast defense. It was not until the revolving turret was placed far above the water-line that it came into its own sphere of usefulness.

The Monitor received her name from Ericsson. In a letter to the Assistant Secretary of the Navy, January 20, 1862, the inventor eulogized his new craft: "The impregnable and aggressive character of this structure will admonish the leaders of the Southern rebellion that the batteries on the banks of the rivers will no longer present barriers to the entrance of the Union forces. The iron-clad intruder will thus prove a severe monitor to those leaders. 'Downing Street' will hardly view with indifference this last 'Yankee notion', this Monitor."

The vessel was 170 feet long, with 41-foot beam and 1200 tons displacement, of low speed and with a low free-board. The sides were protected with three- and five-inch armor, built up in one-inch plates on twenty-seven inches of wood backing. The single revolving turret, protected by eight-inch armor, and placed amidships, carried two eleven-inch smooth-bore Dahlgren guns.

In view of the fact that the Monitor in her day wrought such a revolution among the navies of the world, much has been written of the vessel, so that the average student of American history has a fair conception of her appearance, her armament, and her novel construction. Notwithstanding, few people have an adequate or accurate knowledge of the difficulties and discouragements

which attended the building and launching of the little man-of-war. No complete accounts are available of her activities and of her behavior at sea; indeed, no thorough summation of her career has ever been written.

All credit for the facts in this treatise are due my father, David Roberts Ellis, who served on the "Yankee Cheese Box" from the time of her formal commissioning by the Government to the time of her foundering off Cape Hatteras, thirty miles at sea. While on shipboard he kept a very careful diary and added to it from time to time interesting memoranda of contemporary occurrences, particularly those of the navy.

My father, David Roberts Ellis, was born at Carmarthen, Wales, in 1840. He was the son of Roberts Ellis, who died when the son was 4 years of age. His mother remarried five years later. David attended school as a boy, and at the age of 18 entered Carmarthen College. In November, 1861, without the consent of his stepfather, he shipped for America. February 5, 1862, he enlisted for service on the Monitor as a coal-heaver, but was promoted ten days later to Engineer's Yeoman; subsequently he was made Paymaster's Steward. After the Monitor foundered, he was transferred to the Sassacus, where he performed the duties of an Assistant Paymaster throughout the remainder of the war. Following the war, he became a clergyman in Western Pennsylvania and reared a family of four sons and one daughter. His last appointment terminated in 1902, at Rockwood, Somerset County, Pa. In 1904 he removed to Annville, Lebanon County, Pa. His death, August 29, 1908, left one living survivor who took part in the naval engagement at Hampton Roads. That man was William Durst, of Philadelphia.

WM. O. ELLIS,
Arlington, Mass.

The Monitor of the Civil War

By DAVID R. ELLIS

It is a matter of history that the American Navy at the beginning of the war for the Union was weak and feeble and in no condition for extensive operations. There was a lack not only of trained officers and men but also of suitable warships. Warships in great number and of various types, sizes and rates of speed were required to meet the diversified service on rivers, coasts and oceans. True, Uncle Sam even at that time had some splendid men-of-war. As ships of the period they were among the finest that plowed the sea or graced a fleet. Unfortunately, these were few in number, the vast majority of the vessels being too antiquated in construction and in type to meet the exigencies of the naval warfare of 1861.

According to the Naval Register, there were at the outbreak of the Rebellion ninety-three ships on the general roll. Upon investigation it was found that of these, fifty-three were of the old type—mere sailing vessels—and wholly unworthy for war. Moreover, it was discovered on further inquiry that, of the remaining forty, not all could be utilized for aggressive purposes. Five were utterly unreliable, two had not been launched, two were tugs, one of which was stationed on the Great Lakes, leaving at the disposal of the Government only thirty-one steamers for the prosecution of the war.

What were thirty-one vessels at such a time? Yet this small and undermanned contingent assumed the early blockade of three thousand miles of hostile coast, from the Chesapeake to the Rio Grande. So crippled was the American Navy on the 4th of March, 1861, that if the

crippling had been intentional it could not have been more effectual. There is little wonder, then, that the Navy Department felt itself almost powerless to cope with the difficulties of the situation; the vastness of the operations required, with such meagre funds on hand for their execution. Moreover, in the face of these and kindred perplexities there was a signal lack of co-operation among the officials in the War Department at Washington. In spite of the discouraging outlook, however, Gideon Welles, Secretary of the Navy, energetic and resourceful, on his own responsibility proceeded at once to provide for the wants of the Navy; to increase its effective force and to make this important arm of the service a powerful and efficient factor.

Among the many measures adopted by the Secretary to accomplish this end was the construction of iron-clad warships. The idea was fully in line with the progress of the age in naval shipbuilding. The days of the timber-built man-of-war were over, the era of the iron-clad had dawned. The marvelous development of the gun and the effects of horizontal shell firing made it imperative that all ships of war should thereafter be shielded with iron or steel.

Several of the more progressive nations of Europe had already undertaken the transformation of their fleets from wood to iron. It was common knowledge among naval experts that both England and France had each ten or more iron-clads in course of construction. And in the early part of June, 1861, it also became known to the Navy Department that the South was busily engaged in the building of an iron-armored man-of-war for the ostensible purpose of attacking our blockading fleets and preying on our sea-board cities.

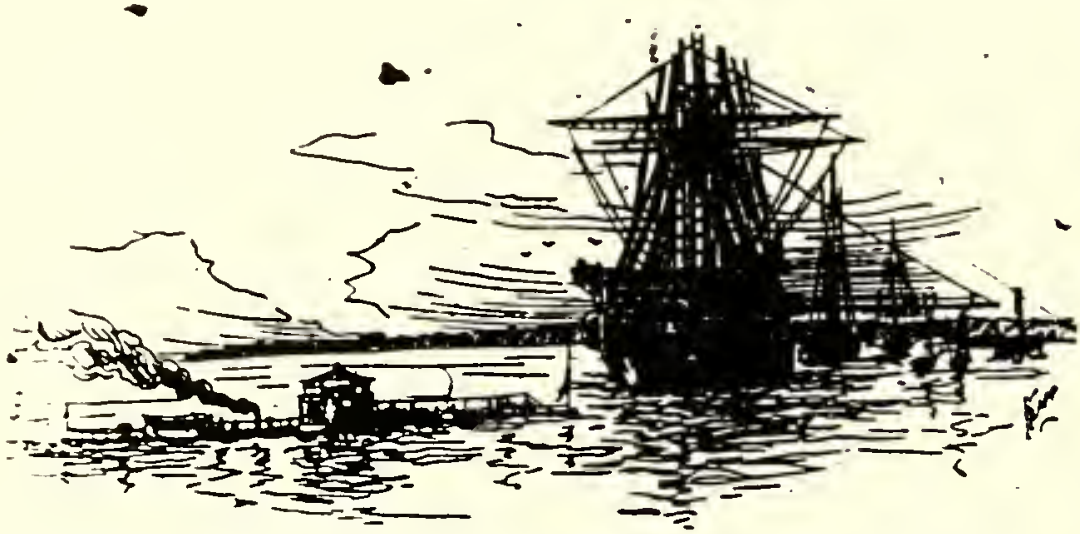
To make a timely preparation for this threatened danger, Secretary Welles, in his July report to Congress,

then in extra session, asked the authority to build a few iron-clad vessels; to be constructed at the earliest possible moment, providing such construction met the approval of a competent Naval Board. Congress responded by an Act, Aug. 8, 1861, authorizing the Secretary to appoint the Board which in turn should direct him to build "one or more iron-clad steamships or steam batteries," and which called for an appropriation of $1,500,000. Five days later the Commission was appointed. It was composed of three naval officers, all of whom ranked very high in professional circles.

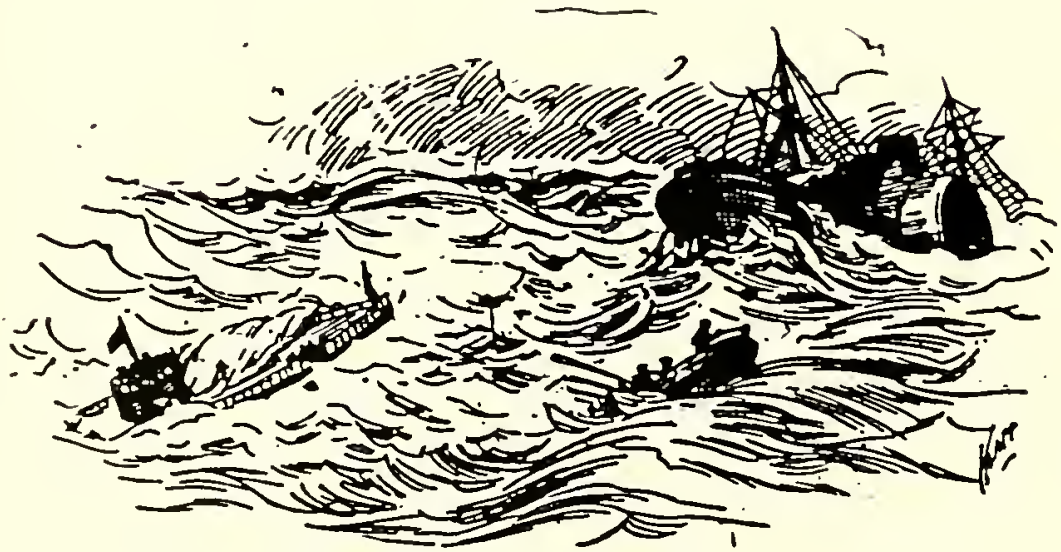
In response to an advertisement by the Government for plans, seventeen were received, which included Captain John Ericsson's design of an iron-turreted floating battery—practically the same plan with slight alterations he had offered Napoleon III in 1854. The reports were submitted by the Commission on September 16, only two of the total number presented being retained. The remaining fiffiteen were rejected outright, among which, strange as it may appear, was Ericsson's idea of the Monitor.

Fortunately, three wealthy and influential men came forward in behalf of Mr. Ericsson and championed the new invention. They were Bushnell, of New Haven, Conn.; Griswald and Winslow, of Troy, N. Y. These were the men, who above all others made the construction of the Monitor possible, when it was so sorely needed. There is no disguising the fact that it was largely thru the efforts and influence of these gentlemen that the "iron-clad Board" was induced to reconsider action, and that finally they reluctantly recommended the building of one vessel of the Monitor model.

All the great inventors of the world have had to struggle at some time or other against an ultra critical and ridiculing public, and Ericsson's case was no exception.



THE ARRIVAL OF THE MONITOR AT HAMPTON ROADS



THE SINKING OF THE MONITOR OFF CAPE HATTERAS

A new invention is the subject of scorn until it is a tried and proven success. Then all the obstructionists rally to the standards of the genius and join in acclaiming his greatness.

On the adoption of the plan, the inventor was instructed to build his "iron-clad, shot-proof, steam-battery," after the model he had presented to the Commission. The contract emphasized that should disaster result to the Union Cause thru this experiment, Mr. Ericsson and his friends would be held to a rigid accountability. The onerous terms of the contract were accepted and subscribed to by Mr. Ericsson's bondsmen, thus evincing their unbounded faith in the inventor and their unfaltering allegiance to the Government. The document was signed October 4, 1861, backed by a bond of $275,000, the contract price of the vessel.

In addition to the customary terms of such investments to safeguard the Government against loss, this contract contained the extraordinary condition that the test of the battery would be its power to withstand the enemies' fire at the closest possible range; a most rigid and drastic requisite. Indeed some have always been of the opinion that the contract was made exceptionally binding so that Ericsson's bondsmen would gladly withdraw from the undertaking, thereby allowing naval experts favorable to the Commission an opportunity for their plans, in which the majority of officials had every confidence.

Now that the contract had been perfected and closed, Ericsson with great enthusiasm proceeded at once to make preliminary arrangements for the immediate construction of the Monitor. It was stipulated that the vessel should be ready for service by the 29th of the following January, just one hundred working days from the date of the contract; hence the marvelous and incessant activity of the inventor during the next few months.

At the outset he discovered that the work of building had to be distributed among several firms, as no one shipbuilding concern in the country had the facilities for making all of the parts. Consequently the hull, engines, propeller and all the machinery, as well as the building of the turret, were let to three different firms in and about New York City; the armor plates for the turret, deck and sides were manufactured in Baltimore; while the shields or penaulums for the protection of the gun ports were sublet to a firm in Buffalo. Altho the work by this unavoidable arrangement was considerably broken up and divided, the largest and by far the most important part of the construction was undertaken in New York City under the immediate supervision of Ericsson, and from plans and drawings furnished by him in person. Also the high reputation of the concerns to whom the subcontracts were let was sufficient guarantee that the construction would be pushed forward with dispatch. All working on the craft spared neither time, nor labor, nor expense in completing the respective portions of the work in the allotted time.

The Monitor was built to meet a special contingency. As already stated, the Government in the early part of June received word from a friend of the Union at Norfolk, Va., that the South was building a most powerful man-of-war. The information was repeated during the months of July, August and September. Yet strangely, notwithstanding the repeated warnings, the Administration at Washington did practically nothing to prepare a suitable vessel to cope with the Southern warship. They were either skeptical regarding the fighting powers of an iron-armored steamer, or they were supremely confident that the Federal fleet of wooden vessels at Hampton Roads would deal out death and destruction to all possible contenders. It was not until the 4th of October that the naval authorities realized the gravity of the

situation; the magnitude and imminence of the danger which menaced the Union fleet and all Union property at the Roads.

On that date—October 4, 1861—Commodore Goldsborough, then in command of the fleet, in a letter to the Secretary of the Navy, stated emphatically that the South was contemplating an early attack on the Roads with the reconstructed Merrimac. This letter of the Commodore's stirred up official Washington. It was a fortunate occurrence, tho perilously late, that they were awakened to the value of preparedness; an awakening which saved the North from an inexcusable blunder and a most humiliating defeat.

The Merrimac, or, as she was renamed by the South, the Virginia, was the U. S. steam-frigate Merrimac. She was a sister ship of the Minnesota, Wabash, Roanoke, Niagara and Colorado. Prior to the war, these vessels were regarded as the most perfect type of war-vessel of the age. It is said that in point of beauty and gracefulness the Merrimac surpassed them all.

When the Norfolk Navy Yard, with its vast quantities of stores, ordnance and naval equipment of all sorts, was abandoned to the South, the Frigate Merrimac was stationed in the river. She was scuttled and set on fire by the evacuating Union forces. The end was only partially attained, for altho the upper works of the ship had burned away, the hull, engines and, in fact, all her machinery were comparatively uninjured. Therefore the South lost no time in utilizing this very valuable acquisition. Measures were at once adopted to have the vessel raised and plans formulated to convert her into an iron-clad of the most formidable type. The mechanicians started to work on her the 25th of June, 1861,—fully four months before the first tap of the hammer echoed from the Monitor. By the first of November, when a week's

progress had been made on the Northern vessel, the Merrimac was half-completed.

At this time the South, learning thru its friends in New York that the mechanics were at work on the Monitor, and that the vessel was to be ready for action in one hundred days, became alarmed. The force of workmen on the Merrimac was at once doubled. Whereupon, the North, learning of this action, set to work three gangs of mechanics on Ericsson's battery, each working for a period of eight hours. Thus it will be seen that the fight for the moment was being carried on not at Hampton Roads, but at Norfolk and Brooklyn. The victory was to depend not so much on the bravery of the men and officers, as upon the speed of the mechanics. It was a race of constructors. In spite of the difficulties at the South and the comparative facilities at the command of the War Department at Washington, the South won. The Merrimac delivered successively tragic blows to the wooden fleet at the Roads for one long day, pending the arrival of the Monitor. The secret of their success lay in the promptness and foresight of preparation—as depends success in any war.

Had it not been for this speed and thoroness on the part of the enemy, there would have been no Merrimac for the Monitor to fight at Hampton Roads, March 9, 1862. Mr. Ericsson had entered into a secret agreement with the Navy Department to submit his Monitor to the most crucial test. When completed, the craft was to proceed without delay to Hampton Roads, pass the Confederate batteries on Sewall's Point and Craney Island, ascend the Elizabeth river to Norfolk, take her position opposite the drydock and with her powerful guns batter to pieces both the Merrimac and the dock itself. That the scheme was feasible in all its details there cannot be the slightest doubt, as is amply proven by the subsequent

performances of the Monitor. The strategy was not carried out, for the Merrimac was floated out of the drydock before the Monitor was near complete—in fact, before she had been taken off the stocks.

The very construction and armament of the Merrimac prove she was a formidable man-of-war. On the central part of the hull, a shot-proof citadel or casemate, one hundred and seventy feet long and seven feet high, was erected. This was built of strong timbers, the whole sloping at an angle and extending into the water, appearing as a house submerged to its very eaves. The entire structure was sheathed with two courses of iron plates, each two and one-half inches in thickness, making five inches of solid armor on two feet of solid wood backing. The battery likewise was substantial and powerful. It consisted of ten splendid guns of large calibre; six nine-inch smooth-bore Dahlgren and four Brooke rifles. The two largest of the Brooke rifles were pivoted, one in each end of the citadel, while the two smaller ones were placed in broadside. In addition she was provided with an immense iron-prow fastened to her stem two feet below the water line. This was a most dangerous offensive and defensive weapon in those days of wooden warships, as was conclusively demonstrated on the 8th of March, 1862, when the Merrimac rammed the Cumberland to her death. Thus in her reconstructed form she was a grotesque and homely yet powerful warship. As some one has said of her: "She was likened to a long shed sunk to its roof, with a gun in each gable end and four in each side."

No wonder the South had strong, unshaken confidence in the power of their vessel—one so strongly built and well equipped. They confidently expected great and important results, favorable to the Cause of the South, to follow the bold and aggressive operations of this iron-

armored warship. This is evident from a letter written by the Southern Secretary of the Navy to the Commander of the Merrimac. In that letter, dated February 24, 1862, we find: "Could you pass Old Point safely and make a dashing cruise on the Potomac as far as Washington? Its effects upon the public mind would be important to the Cause." In another letter to the same officer, dated March 7—the day before the Merrimac made her descent upon the Roads—the Secretary writes: "I submit for your consideration the attack of New York by the Virginia (Merrimac). Can the Virginia steam to New York and attack and burn the city? She can, I doubt not, pass Old Point safely and in good weather and a smooth sea she could probably reach New York. Once in the bay she could shell and burn the city and its shipping. Such an event would eclipse all the glories of the combats of the sea, would place every man in a pre-eminently high position, and would strike a blow from which the enemy would never recover. Peace would inevitably follow. Bankers would withdraw their capital from the city, the Brooklyn Navy Yard and its magazines and all the lower part of the city would be destroyed. Such an event by a single ship would do more to achieve an immediate independence than would the results of many campaigns."

Altho the work on the Monitor had been in progress since the 22nd of October, the latter part of January, 1862, found her far from complete. Difficulties unforeseen at the time of drawing up the contract had unavoidably arisen. It was stated elsewhere that many of her parts had to be made in Baltimore and Buffalo, while others, which were wholly new, necessitated new machinery for their manufacture. When these and kindred facts were laid before the Department, an extension of time was readily granted.

The Monitor was launched January 30, two days after the Merrimac had been taken off the dry-dock. On Feb-

ruary 15th, Lieutenant John L. Worden was assigned to her command and ordered thus early to familiarize himself with her novel construction. February 20th the craft was taken for her initial trial trip; it proved a complete failure. The vessel was utterly unmanageable; her rudder was at fault. The Commandant of the Navy Yard proposed to dock her in order, as he said, "to put in a new and better rudder!" When Mr. Ericsson learned what was to be done to the craft, he became vehement.

"Put in a new rudder? The Monitor is mine, and I say it shall not be done. They would waste a month in doing it. I will make her steer easily in three days."

True, he did make the vessel steer; but he signally failed for want of time to entirely remove the difficulty, as will be seen from subsequent occurrences.

On February 25th, the Monitor was turned over to the Government and formally commissioned—just one day after the South had appointed Commodore Franklin Buchanan to the command of the Merrimac (wounded March 8, and succeeded by Lieut. Catesby Ap R. Jones during the fight with the Monitor). Considerable perplexity was experienced by the officers in charge of the enlistment of the crew. Very few wished to volunteer service on the craft; she had not been pronounced seaworthy, and no one could safely judge of her fighting qualities. Fifty-eight men were finally secured, sixteen of whom were commissioned officers; the remainder classified as engineers, firemen, stewards, and cooks.

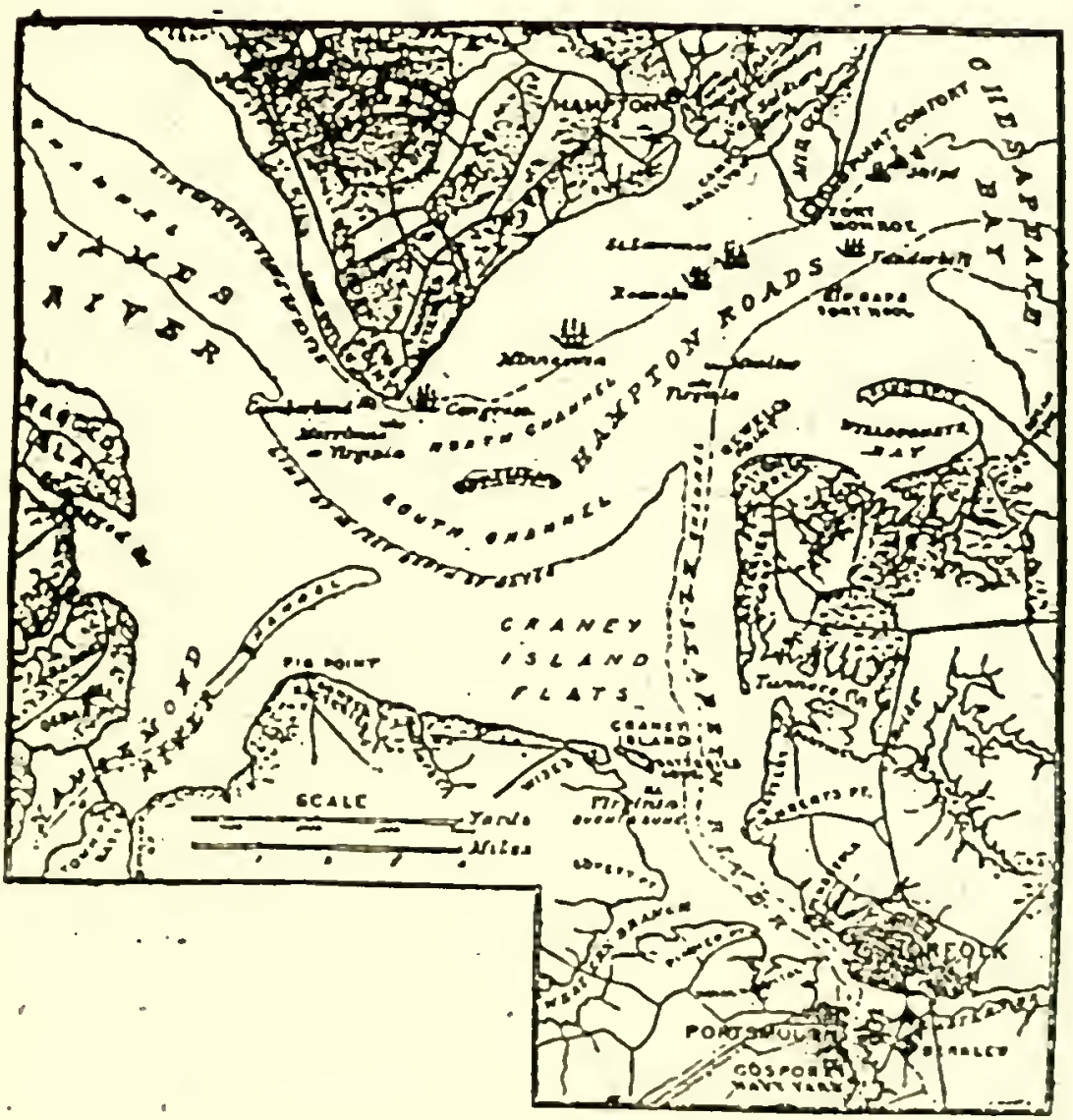
Lieutenant Worden on the same date of the vessel's commission was ordered forthwith to Hampton Roads. In the event this command could not be executed, the order stated that it was important that he should name exactly the day the Monitor could be at the Roads. The vessel could not go that day, nor the next, nor indeed for several days; the fault again lay with her steering gear.

It was due rather to hasty construction than to the violation of any mechanical principles, but time was consumed in the adjustment of the difficulty. This meant delay, which was extremely perilous to the North, indeed fraught with the most disastrous possibilities to the Cause.

On February 26, Captain Marston, Commander of the Roanoke, telegraphed Secretary Welles, stating therein that the ram Merrimac was positively expected at the Roads any moment. Fortunately, tho apparently ready, the Merrimac could not make nor leave port. Her trial trip also brought to light a serious defect in her steering —quite coincident with misfortunes besetting the Monitor. Had the Merrimac steamed to Hampton Roads and completely destroyed the wooden fleet of vessels, she might have and doubtless she would have turned her attention to the Potomac and the Capitol.

In sharp contrast with the unanimity of Southern confidence in the Merrimac, the North was much divided in its opinions as to the real strength and fighting powers of the Monitor. Even in Naval circles there was a sad lack of confidence. Some of the most prominent officials were outspoken in their condemnation of the craft. Many newspapers were most unsparing in their criticisms. Annoyed and perplexed by such unfriendliness towards the new invention, Secretary Welles, to satisfy himself as to the probable falseness or correctness of these animadversions, ordered Commander Porter (later Admiral Porter) to make a thoro examination of the vessel and to report his findings without delay. The Commander having promptly and conscientiously dispatched his duty, telegraphed to Washington:

"This is the strongest ship of the Navy. She can whip anything afloat."



MAP OF HAMPTON ROADS AND VICINITY

It failed to convince the Secretary's Advisors, for it is asserted when the Commander returned to Washington, a naval official of high rank reprimanded him for his temerity and rashness in commending an invention which had not been put to the test, and in which the great majority of naval men placed no confidence. The Commander's high estimate of Ericsson's craft, however much other naval experts differed with him, was singularly correct; nor was it long until the vessel beat back the iron-clad Merrimac, to the great joy and delight of millions of loyal hearts.

* * * * * * *

March the 1st came and found us still at the Brooklyn Navy Yard, detained on account of our improvident steering. The mechanics were still at work on it. Three days later, March 4, we made our final trial trip, the little warship steering admirably. So at last at eleven o'clock in the forenoon of March 6, after taking on board ammunition and ballast, we left the port of New York for the waters of the Chesapeake. The Monitor was towed by the small tug, the Seth Low, and accompanied by the two wooden gun boats, the Sachem and the Currituck.

The crowds of men, women and children out along East River to see us off and to cheer and to shout good-luck and bon voyage, spoke an intense interest in the ship and its first venture. This was no doubt stimulated by speculation heard on every side for weeks previous as to the seagoing qualities of the craft and her ability to make headway even in smooth waters.

On the date of our departure from Northern waters, a very fortunate occurrence took place. Shortly after we left, an order came from Washington to the Commandant of the Brooklyn Navy Yard instructing him not to send the Monitor to Hampton Roads but to Washington. The authorities deemed it of greater moment to have the

Potomac free than to have the fleet at the Roads reinforced. Tho an earnest effort was made to have the order delivered, the tug sent on the mission failed to overtake us.

Our passage from New York to Hampton Roads proved difficult and dangerous. Strong winds and a rough sea almost ended the career of the Monitor, and with it, for at least some time, Ericsson's idea of a turreted man-of-war. At noon on our second day out, a fresh breeze from the Northwest, lifting the sea gently over the decks, demonstrated that whatever else our craft was designed for, she was not built for turbulent waters. The breeze increased rapidly in force. By three o'clock it had become a strong gale rolling mighty waves over the deck, the pilot-house and the blower pipes; driving the sea violently against the turret and the smoke stacks, and frequently breaking over their very tops. Streams of water came thru the hawse and blowers, under the turret and thru the eye-holes of the pilot-house, clearly foreboding much trouble if not actual disaster The blowers which supplied the artificial draft for the furnaces were motionless; the sea entering thru the blower-pipes fell on the blower belts, causing them to slip and break, and so the fires refused to burn. In turn there was no steam. The spray from the waves breaking over the smoke stacks fell into them, choking the flues and driving out into the fire and engine rooms deadly gas from the smouldering, half-extinguished fires. The hand pumps were manned, but they proved inadequate. Bailing was resorted to, not with a view of holding the water in check, but rather to divert the members of the crew from panic.

At 10:15 p.m. the storm abated somewhat and conditions grew decidedly better. The blowers were again started, steam generated, the pumps put in motion and the big twin engines were once more pushing us along in the direction of our destination. Shortly after midnight

in crossing a shoal we again experienced considerable difficulty with the fires and blowers, but we soon emerged from this second trial.

It was nearly four oclock in the afternoon of the 8th, when passing Cape Henry into the waters of the Chesapeake, we could distinctly hear the booming of big guns in the direction of Fortress Monroe. Lieutenant Worden believed the sound was from artillery practice at the Fort. A pilot coming on board a little later informed us that the Merrimac had made her advent and was doing battle with the Union fleet. Thereupon orders were immediately given to strip the Monitor of her sea-rig and prepare her for action. Accordingly the blower pipes were taken down, the turret keyed up, practice at the guns commenced, and many other things put in shipshape order for the impending conflict.

We reached our destination, Fortress Monroe, at 8:30 in the evening. We were scheduled to get in early that morning, but considering the tremendous difficulties we encountered en route, it was simply remarkable that we arrived at all. Anchoring the Monitor near the flagship, Lieutenant Worden reported in person to Captain Marston, then in command of the fleet in the absence of Commodore Goldsborough, who at the time was conducting operations on the North Carolina coast in conjunction with General Burnside's expedition.

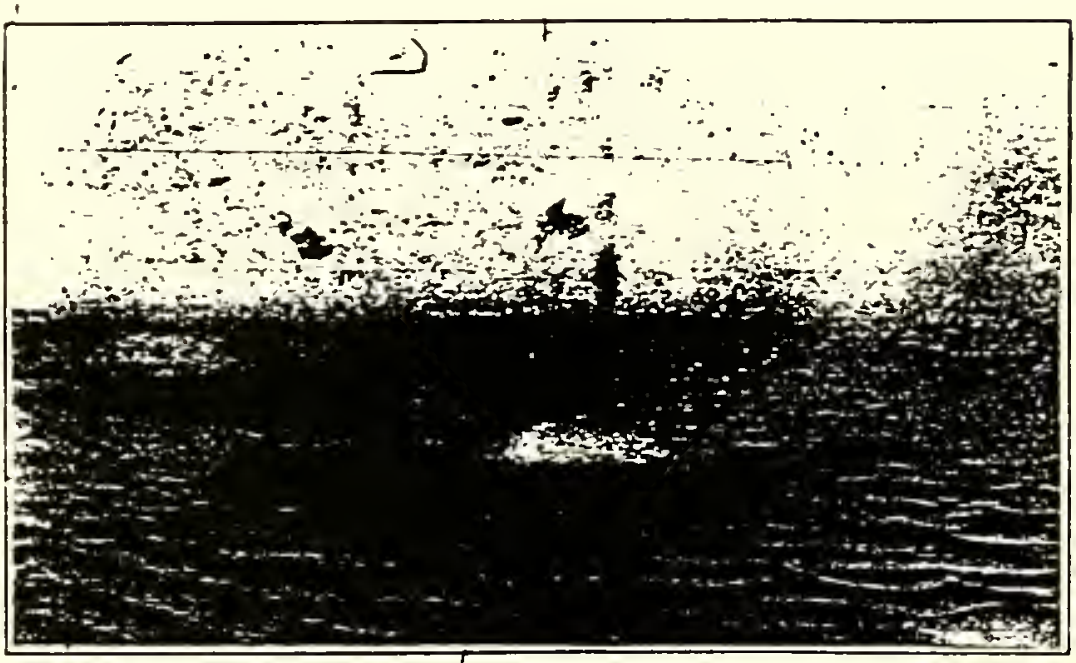
On Lieut. Worden reporting for orders, the first consideration was the command from the Department to Captain Marston directing him to send the Monitor to Washington. This order, a duplicate of the one to the Commandant of the Brooklyn Navy Yard, was not executed, the two officers agreeing to disregard it. So the Monitor was kept at Hampton Roads, and we were forthwith directed to the assistance of the Minnesota, hard

aground about six miles distant in the neighborhood of Newport News.

To do this we required the services of a pilot, as the fellow who brought us in refused to go with us farther, alleging that he was unacquainted with the channel in that part of the Roads. Three other pilots were interviewed, but all of them declined with an excuse of the same nature.

While at Fortress Monroe in quest of a pilot, the details of the day's fighting were related to us. It was a harrowing tale. Two of the largest and strongest vessels of the fleet had been utterly destroyed, while two hundred and more of our comrades were killed, drowned or wounded. Accompanied by two small wooden gun boats and on land by hundreds of men and women who had come down from Portsmouth, the Merrimac had made her appearance seven hours prior to our arrival. There were at the time in Hampton Roads five large men-of-war, the Minnesota, the Roanoke, the St. Lawrence lying at Fortress Monroe, the Cumberland and the Congress, off Newport News. The latter two were absolutely destroyed; the Cumberland was sunk by the iron ram of the Merrimac, while the Congress was burned from hot shot and incendiary shell. Tho fighting with all the energy and the bravery desperation calls forth, these ships failed to inflict material injury on their iron-clad adversary.

The Merrimac next turned her attention to the Minnesota, hard aground in the middle of the channel a mile and a half below Newport News. She obtained this dangerous position on her passage up from Fortress Monroe to the scene of the conflict. Fortunately, owing to the low stage of the tide, the Merrimac could not approach within gun range, and this alone saved the Minnesota from the doom of her consorts. The Merrimac withdrew



THE BATTLE BETWEEN THE MONITOR AND MERRRIMAC

to safe anchorage for the night under the protection of the batteries on Sewall's Point, well satisfied with the work of the day, and doubtless intending "to bag her fox in the morning".

These tragic scenes having ended, let us return to Fortress Monroe and bring up our vessel to the Minnesota, where we had been ordered for the night. After spending two hours in a fruitless search for a pilot, we ultimately succeeded in getting a good one. Acting Master Samuel Howard, of the U. S. Bark Amanda, then in Hampton Roads, came forward and volunteered to pilot us. This was encouraging to the Lieutenant, as Mr. Howard had the reputation of not only being a competent helmsman but also that of a brave man. Such he proved himself to be by his efficient management of the Monitor in her fight with the Merrimac.

Carefully piloted and brilliantly lighted the whole way by the flames of the burning Congress, we reached the Minnesota after midnight and anchored astern of the grounded frigate. We found the crew of the Minnesota very dejected and dispirited. The amazing power of the Southern man-of-war; the ease with which she meted out destruction; the failure of the Congress and the Cumberland to withstand the onslaught, had fairly dazed and disconcerted them. They could neither flee nor fight. Likewise the other vessels of the fleet were incapacitated for action; the Roanoke had her propeller shaft broken while the St. Lawrence was a mere sail frigate and of no consequence in an engagement. There is little wonder, then, that Captain Van Brunt, of the Minnesota, had made all the necessary preparations to set his vessel on fire providing she could not be floated out at high water.

Ordinarily in war, whether on land or on sea, reinforcements are a source of inspiration to both officers and men. But the arrival of the Monitor at Hampton Roads failed

to relieve the intense anxiety of the officers and men of the fleet; this failure after all was not surprising. It is a well known fact that not a single official had confidence in the new craft. What was true of the officers was largely true of the men. When the crew of the Minnesota saw in the early morning light what manner of fighting vessel had come to protect them and do battle with the enemy, they viewed her with mingled curiosity and contempt. The Monitor was insignificant and contemptible in appearance. The South rightly termed her a "Yankee cheese-box on a raft." Diminutive in size, low in the water, with nothing visible but the turret and the small pilot house, and carrying only two guns, she seemed anything but formidable. Therefore one who had not examined her internal structure nor studied the mechanical principles upon which she was constructed knew very little of her real strength.

Even Mr. Stanton, Secretary of War, was led to believe the Monitor wholly incapable of rendering service in war. At a cabinet meeting held late Saturday evening, March 8, 1862, after the news of the disaster at Hampton Roads arrived in Washington, Mr. Stanton declared that the Merrimac would change the whole character of the war, that she would destroy every Union vessel and lay all sea-board cities subject to tribute. When Gideon Welles explained that the Monitor was not in the fight, as her arrival at the Roads had been delayed and encouragingly added that the outcome would have been different had the litfle craft taken part. "What!" responded Mr. Stanton. "What is the size and strength of this Monitor? How many guns does she carry?" When Secretary Welles replied "two, but of the largest calibre," Mr. Stanton turned away with a look of amazement and distress.

Let us return once more to the actions of our vessel.

An hour had elapsed after our anchorage near the Minnesota. It was then 1:30 o'clock in the morning of the 9th. The Congress was still burning. Thirty minutes later her magazines exploded with a series of deafening reports, sending upwards columns of fire and smoke. Altho sad and doleful, it was a grand spectacle, a sight we have never forgotten. At three o'clock a second attempt was made by two powerful tugs to haul the Minnesota off the shoal, but the big man-of-war was fast aground. We had less than two hours now until dawn. These were the moments which seemed long and tedious to us. We had not closed an eye in sleep for forty-eight hours, yet the present hours were not given to sleep but rather to serious thought. We were not free from doubts and fears concerning the Monitor. Would she stand up against attack? A test which involved such tremendous issues!

In due time the morning came. It was calm and clear; just a bright, beautiful Sunday morning. Only a light thin mist could be seen, hanging low over the waters and apparently resting on the shores. It was difficult to believe that we were actually within the zone of hostilities where the day before the storm of war broke and where hundreds of men fought and died for a Great Right and for their country's weal.

Soon after seven o'clock in the morning, the Merrimac was reported coming down from Norfolk. Instantly all was life on our vessel. The iron hatches were closed, dead light covers put on and everything removed from the deck. These preparations concluded, the officers and men took their stations; Lieutenant Worden directed operations from the pilot house, a wrought iron structure situated well forward near the bow and projecting four feet upwards from the deck, whence a speaking tube ran to the turret in the center of the craft. By Lieutenant

Worden's side was Howard the pilot. Lieutenant Greene commanded in the turret; and an engineer, together with an assistant, had charge of the machinery which controlled the revolving of the turret, while each of the two guns were manned by a crew of eight men.

Peering across Hampton Roads thru the mists of the morning, we dimly saw the outlines of our foe assuming more and more distinct form as she approached to resume her work of sinking and destroying Yankee ships. She slipped her moorings at eight o'clock and, commanded by Lieutenant Jones, headed for the Minnesota. She steamed in the direction of the Rip Raps, and when within a half mile threw a solid shot at the Minnesota, the missile falling short of its aim.

It was 8:25 a.m. when the Merrimac opened fire by discharging her bow gun. She was now a quarter of a mile distant from us, but coming on under a full head of steam. We swung from our anchorage, holding our fire until within easy range. On command the engines were stopped, the turret revolved, the guns were brought to bear, and the fire of the enemy was returned. A starboard broadside from the Merrimac raked us mercilessly. The impact of the shot on the turret was tremendous, frequently throwing the men against the guns and sides of the turret itself. But the iron plating of our craft held up against the attack, and the turret continued to move freely. All of us took heart, our suspicions were removed, fear received no quarter, and we settled to our work with bull dog pluck and determination.

After the first exchange of shots the vessels closed in on each other, and the fighting went on at close quarters; frequently the ships were less than several yards apart. Time after time the Merrimac maneuvered to run us down. In one instance worthy of mention the long iron prow of the enemy glided and skidded over our stern:

Lieutenant Greene quickly brought a gun to bear on her water line, the shot penetrating the armor and splintering the wood caused her to make a hasty retreat from the position. Howard manipulated the Monitor dextrously and stood out pre-eminently the individual hero of the engagement.

The duel was fought, as is well known, amid a veritable rainstorm of iron, and to a thunderous accompaniment from all the batteries around the Roads and from the Confederate warships Jamestown and Yorktown, which lay at a safe distance to the south. The Southern batteries at Sewalls Point, Craney Island, Big Point and Barrel Point all shelled the Monitor; Fortress Monroe, the Federal batteries on the Rip Raps and at Newport News, the Minnesota nearby, kept up a continual firing at the Merrimac, while a mile away off Newport News the smoke from the smouldering Congress added to the dense clouds which made the bright day dark.

Soon after noon, a shot fired at close range from one of the Merrimac's guns struck our pilot house, shattered one log and lifted the roofing; Lieutenant Worden was thrown, stunned and partially blinded from the powder of the discharge. The daylight, filtering thru the opening thus made, led him to believe that the pilot house had been destroyed. He ordered Howard to put the helm to starboard and sheer off. Lieutenant Greene immediately went to his assistance, and after helping Worden to his cabin, where he was relieved by the surgeon on board, was placed in command of the vessel.

Meantime, however, the Monitor had followed Worden's orders and left the scene of battle. When Lieutenant Greene turned her back the Merrimac was in full retreat. Probably twenty minutes had elapsed. We fired shots after her as a challenge to renew the engagement,

but he headed up the Elizabeth river, so we again took our position by the Minnesota.

During the battle our vessel fired forty-one shots. She was struck twice on the pilot house, eight times on the side, and nine times on the turret. The Merrimac showed ninety-seven indentations and holes in her armor, twenty-one of which were conceded to be from the guns of the Monitor.

Secretary Welles authorized the use of but half a charge of powder in the guns of the Monitor since these were the newest of Dahlgren's and had never been properly tested on our craft. Lieutenant Worden remarked following the fight: "Had I been allowed the full use of powder in the guns, I would have literally blown her to pieces."

Now that the Master Weavers have woven together the torn fabric of the Civil War days and North and South are one, we cannot write but gallant words for the South, nor could we write other than that the crew of the Merrimac fought gamely. It must be remembered that she was manned by brave men, men equal to those fighting for the Union both in courage and in ruggedness; they were our kin—brother against brother. Indeed, it had always been a moot question whether or no the fight at Hampton Roads was an actual victory for the North. As regards the engagement proper; manifestly it was not complete, but no one longer disputes that the Monitor stemmed the mad rush of the powerful Merrimac. A draw at that particular moment was nothing less than a victory. It allayed fear for the outcome, it encouraged the North, it was one of the crises of the War.

* * * * * * * * *

The Monitor stayed at Hampton Roads until May 12, 1862, on which date the South evacuated Norfolk and burned the Merrimac. She led the vessels that steamed

up the Elizabeth in the wake of the retiring Southerners. Later we went up the James with the flotilla under the command of Captain Rodgers, in connection with McClellan's advance on Richmond by way of the Peninsula, taking part while thus employed in the attack upon Fort Darling. From this time until McClellan's retreat from the Peninsula we were employed in patrolling the James. Then we went to Washington for repairs and returned to Hampton Roads late in November.

On the afternoon of December the 29th the Monitor left the Roads in tow of the Rhode Island, bound for Beaufort, N. C. A light southwest wind was blowing when we made our departure, and the weather was exceptionally clear and pleasant. During the night we passed Cape Henry, and dawn found us fourteen miles at sea.

The morning and the evening passed quietly. Toward evening, however, a swell set in from the southwest, and the sea, sweeping over the pilot-house, struck the base of the turret with astonishing violence. Soon it was common to us all that water was making its way into the hold of our vessel, altho for a few hours the bilge pumps kept her free.

Our convoy, the Rhode Island, was a powerful side-wheel steamer. A slight twist canted her bow to port and her stern to starboard, making her appear very unkempt and disreputable. It was, indeed, difficult to say when she was on even keel. She plowed the sea with her bow out of water, and was subject to very heavy pounding in rough waters. A year later when the vessel was caught in a storm her upper and lower hulls were forced apart and she foundered. Altho her engines clanked and a hundred varied squeaks came from her internal machinery, she managed withal to wallow thru the waves with considerble speed.

We now plunged after our consort thru the gathering

darkness of that December night. By eight o'clock the wind had increased to a vicious half-gale, causing our craft to heave and plunge deeply; so far as effects on the turret went, a fairly uncomfortable whole gale or cold cutting wind. Our situation continued to grow worse. Knowing in what manner of craft we were shipping, the announcement of a leak in the fire-room was calmly received. The pumps were at once set in motion and for a time the water gave way before them. From nine to ten it kept pace with them. At ten and thereafter, with the wind increasing in violence, with the pumps in constant motion, the water steadily gained on us. It rose especially fast in the engine-room and rapidly approached the fires in the furnace.

The head sea, choppy as compared to our length, dealt successive blows, each one sending a cloud of thick spray aloft, obscuring the turret and falling into the smokestacks. The water entered our craft on every hand; under the turret, thru the hawse and blower pipes, thru the eye holes of the pilot house and from two large leaks in her hold. With the blowers out of commission, the fires grew low and eventually went out from the spray coming in thru the smokestacks; thus there was no steam; not even sufficient pressure to operate the pumps. And the water grew and grew in quantity in our little craft so that it became increasingly evident time only held our fate.

We were unprepared for such circumstances. We had no boats of our own for use in distress. Accordingly Lieutenant Bankhead in command ordered Coston Signals run up in the event the Rhode Island could immediately lend assistance. In response to which Commander Trenchard signaled that three relief parties had been sent to our aid. In due time two of these boats reached us, the third, however, with her crew of four men doubtless went adrift, for we never saw her, nor heard from any of the men.

On consultation by the commanding officers, the order was given to cut the hawser which attached us to our convoy—a task which was equally difficult and perilous in so rough a sea. Four volunteers succeeded in executing the command, and the Monitor thereby was left to her fate. As was stated elsewhere, our vessel was not a sea-going warship, her place was on the rivers and in the harbors. In peaceful waters she behaved becomingly, but in the troughs of mighty waves we were tossed and buffeted as driftwood in a torrential stream. Prior to the cutting of the cable our craft never righted herself properly in the interim of successive swells, nor did we ride the sea but contrariwise we plowed thru, the waves breaking over us and losing us momentarily from our consort. But for the cutting of the hawser, the Monitor would have foundered ere assistance arrived.

Lieutenant Bankhead now ordered an anchor let go with the hope that it might bring the vessel's head to wind and that it would hold until the crew could be taken off. The idea proved correct, and the craft came head to when the cable brought her up. Twenty minutes following, the first relief boat from the Rhode Island hove alongside. Bankhead now ordered Greene, second in command, to get as many of the crew into her as she would safely accommodate. This was a difficult matter, for sometimes the boat held her place by the Monitor's side only to be dashed out of reach an instant later. A comrade would spring from the deck as the boat was righting itself, be seen momentarily In mid-air, and then meet her half way as she rose from the trough. So the boat was filled up, many of the men being first thrown into the sea, but fortunately all succeeding in getting back into her and she pulled off for the Rhode Island, passing en route the second boat dispatched for our assistance.

Our vessel was still filling rapidly. She had settled

tremendously, so much so that the deck was continually submerged. All of the men in the turret were ordered to make the pilot house when chance favored and to lose no time in getting into the second boat on her arrival. Those of us gathered together forthwith made our departure from the turret. We came to the pilot house after trying experience with the water on the lower deck. There were seven of us including Lieutenants Bankhead and Greene. Thus we waited; a few of us were inclined to think of the grave situation while others talked cheerily and encouragingly.

Altho it seemed hours between the departure of the first boat and the arrival of the second, it was in reality a very short time, as we afterwards learned. We were loaded into her, the officers being the last to leave the little man-of-war. White, however, who could not swim a stroke, would have remained with the vessel but at the command of Bankhead to jump for his life, leaped for the boat, missed it and fell into the sea. With difficulty we succeeded in getting hold of him, altho the boat was already under way, as the peril of suction from the foundering Monitor was rapidly increasing. Thus we hauled him thru the waters for a quarter of a mile, when we took him into the boat. He was pretty well exhausted, but revived later on boarding the Rhode Island, three miles from the disaster.

We watched from the latter vessel the red and white lights above the turret on the pennant staff of our craft. At one o'clock on the morning of Wednesday, December 31st, 1862, she sank in fifty fathoms of water, and we saw our litt e vessel no more. One can still find her there on the bottom of the sea in those troubled waters off Cape Hatteras. Sixteen men were lost out of a crew of forty-five, four of whom were commissioned officers.

And so the Monitor, the prototype of the modern tur-

reted cruiser and dreadnaught, was built and launched notwithstanding the criticisms heaped upon the inventor and his friends. She fought a battle for the North and won a signal success. Tho her career was brief, she wrought a revolution in the naval circles of the world. The little craft moreover attained and fulfilled her purpose —she preserved the Union.

CREW OF THE MONITOR

LIEUT. J. L. WORDEN	Commander
LIEUT. S. D. GREENE	Executive Officer
LOUIS N. STODDER	Master
DANIEL C. LOGUE	Assistant Surgeon
W. F. KEELER	Paymaster
ISAAC NEWTON	First Ass't Engineer
ALBERT B. CAMPBELL	Second Ass't Engineer
R. W. HANDS	Third Ass't Engineer
M. F. SUNDSTRUM	Third Ass't Engineer
DANIEL TAFFY	Captain's Clerk
GEORGE FREDERICKSON	Acting Master's Mate
JESSE M. JONES	Hospital Steward
RICHARD ANGIER	Quartermaster
PETER WILLIAMS	Quartermaster
MOSES STEARNS	Quartermaster
DERRICK BRINKMAN	Quartermaster's Mate
JOSEPH CROWN	Gunner's Mate
JOHN ROONEY	Master-at-Arms
THOMAS CARROL, 1st	Captain of Hold
JOHN P. CONKLING	Quarter Gunner
JOHN SLOCKING	Boatswain's Mate
LAWRENCE MURREY	Landsman
WILLIAM H. NICHOLS	Landsman
WILIAM BYRON	Yeoman
DAVID CUDDLEBUCK	Officers' Steward
EDWARD MOORE	Officers' Cook
THOMAS LONGHRAN	Ship's Cook
THOMAS CARROLL, 2nd	First-class Boy

FIRST CLASS FIREMEN

JOHN DRISCOLL	ABRAHAM FESTER
WILLIAM RICHARDSON	GEORGE S. GEER
PATRICK HANNAN	MATTHEW LEONARD
JOHN GARRETY	EDMUND BROWN

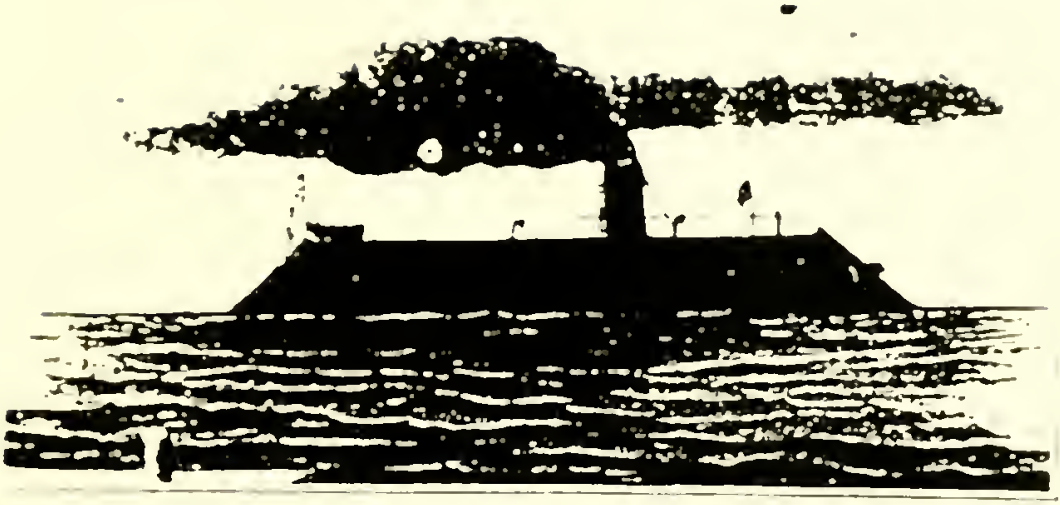
COAL HEAVERS

MICHAEL MOONEY
WILLIAM DURST
ROBERT QUINN
CHRISTY PRICE
DAVID ROBERTS ELLIS
JAMES SURY
JOHN MASON

SEAMEN

CHARLES F. SYLVESTER
ANTON BASTING
PETER TRUSCOTT
WILLIAM MARION
JAMES FENWICK
CHARLES PETERSON
HANS ANDERSON
THOMAS B. VIAL
ANTHONY CONNELLY

A. C. STIMERS. Chief Engineer, Passenger, and Volunteer Officer



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